

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF NORTH CAROLINA  
WESTERN DIVISION  
No. 5:23-CV-621-BO-BM

DARIUS DANZY,

Plaintiff,

v.

CSX TRANSPORTATION INC.,

Defendant.

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**ORDER**

This matter comes before the court on the motion in limine by *pro se* plaintiff Darius Danzy (“plaintiff”) [DE-24] to exclude (“motion to exclude”) the expert testimony of Dr. R.H. Barry Sample (“Dr. Sample”). Defendant CSX Transportation Inc. (“CSX” or “defendant”) filed a response in opposition [DE-25], with exhibits [DE-25-1 to 25-5], including Dr. Sample’s written expert report [DE-25-1] (“Dr. Sample’s Report”) and curriculum vitae of [DE-25-2]. Plaintiff filed a reply [DE-26] with exhibits [DE-26-2 to -26-5], consisting of an executive order and various sections of the Code of Federal Regulations.

This matter is also before the court on plaintiff’s motion for leave [DE-27] to file supplemental exhibits [DE-27-2 to 27-5], consisting of additional reports and drug testing forms, in support of his reply [DE-26]. Defendant does not oppose plaintiff’s motion to include the supplemental exhibits as part of his reply. [DE-28].

For the reasons provided below, plaintiff’s unopposed motion for leave [DE-27] to file supplemental exhibits to his reply [DE-26] is GRANTED, and plaintiff’s motion to exclude expert testimony is DENIED.

**I. BACKGROUND**

Plaintiff filed this suit against defendant in this action under Title VII of the Civil Rights

Act of 1964, as amended (“Title VII”) alleging “unlawful employment practices on the basis of race.” Compl. [DE-1-1] at 2. Plaintiff’s claims arise out of a pre-employment drug-screening that defendant administered to plaintiff through third party drug testing companies, Psychemedics Corporation (“Psychemedics”) and Omega Laboratories, Inc. (“Omega”). *See generally* [DE-1]; [DE-1-1]; [DE-9]. Plaintiff alleges that defendant discriminated against him because of his race as a “Black-African American” by subjecting him to narcotic testing that disparately impacts the “class of Black African Americans” due to the allegedly unreliable and inaccurate method of hair follicle testing used by defendant through Psychemedics in its pre-employment drug screening. *Id.*

#### **A. Factual Background**

Defendant is a corporation operating rail-based transportation services in the eastern United States and parts of Canada providing interstate delivery of commerce by railway. [DE-9] at ¶ 5; Compl. [DE-1-1] at ¶ 5. Defendant extends offers of employment to candidates for “Safety Sensitive Positions” contingent upon the candidate successfully passing a medical examination and drug screen performed by a third party. [DE-9] at ¶ 18. A urine sample and hair follicle sample are to be collected and tested by separate laboratories. *Id.* at ¶ 20; Compl. [DE-1-1] at ¶ 20. Plaintiff alleges the results are reviewed by a Medical Review Officer (“MRO”), and that MRO’s used by the defendant are not licensed to practice medicine in North Carolina. Compl. [DE-1-1] at ¶ 21.

Defendant extended an offer of employment to plaintiff, contingent upon plaintiff passing a medical exam and drug screen. [DE-9] at ¶ 11. On or about April 28, 2023, plaintiff “reported for an employment physical examination which included a healthcare examination and to provide

hair and urine for illicit narcotics screen.” Compl. [DE-1-1] at ¶ 11. Plaintiff’s underarm hair follicle and urine sample were tested for cocaine metabolites, opi-cod/mor, phencyclidine (PCP), amphetamines, marijuana (THC metabolite) and benzodiazepines. *Id.* at ¶ 12.

On May 2, 2023, plaintiff’s underarm hair follicle was tested by Psychemedics. *Id.* at ¶13. Psychemedics reported to the MRO that plaintiff’s underarm hair follicle tested positive for cocaine; plaintiff was notified by the MRO on the same date. *Id.* at ¶13; [DE-9] at ¶13. At this time, plaintiff “vehemently denied . . . the accuracy and truthfulness of the results.” Compl. [DE-1-1] at ¶ 16. Plaintiff requested “an immediate resubmission and retest with a new sample at a different laboratory” over concerns of possible contamination of the sample. *Id.* at ¶ 17. Plaintiff alleges that defendant ignored or denied this request. *Id.* Defendant represents that it sent plaintiff’s hair follicle to a second laboratory, where it tested positive for cocaine metabolites a second time. [DE-9] at ¶ 17.<sup>1</sup>

On May 8, 2023, despite plaintiff’s objection and request for retesting, defendant sent plaintiff an email rescinding plaintiff’s offer of employment “because plaintiff failed to pass the . . . drug screen.” [DE-9] at ¶ 14. Plaintiff alleges that two days *after* defendant rescinded plaintiff’s offer of employment, his urine had tested negative for drug usage by Clinical Reference Laboratory (“CLR”), and defendant failed to consider the urine test results prior to rescinding plaintiff’s offer of employment. Compl. [DE-1-1] at ¶15.

On October 30, 2023, plaintiff filed the instant suit, alleging that the follicle testing he experienced “causes significant disparate impact on Black African American employees and job

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<sup>1</sup> Defendant does not appear to allege that a new sample was collected and tested at a different laboratory and instead appears to have retested the hair follicle tested on April 28, 2023. Compare Compl. [DE-1-1] at ¶ 17 with [DE-9] at ¶ 17 and [DE-9-2] at 2.

applicants” because “exogeneous environmental exposure to the melanated hair of Black African Americans produce[s] false positive results because of how cocaine specifically chemically binds to melanin pigmentation of the hair.” Compl. [DE-1-1] at ¶22.

**B. Dr. Sample’s qualifications, report, and opinion**

Pursuant to the scheduling order in this case [DE-16], defendant designated Dr. Sample as its retained expert and disclosed Dr. Sample’s Report prepared and signed by Dr. Sample on February 21, 2025. [DE-25] at 2.

Dr. Sample is a forensic toxicologist with a Ph.D. in the field of Pharmacology from Indiana University and has worked in the field of forensic toxicology for over thirty-five years. [DE-25-1] at ¶ 1. For over twenty years Dr. Sample worked as the Director of Science and Technology for Quest Diagnostics (*see* [DE-25-2] at 2), “one of the largest forensic workforce (workplace) drug testing laboratory providers in the United States.” [DE-25-1] at ¶ 2. Dr. Sample served two separate four-year terms as a member of the Substance Abuse and Mental Health Services Administration (“SAMHSA”) Drug Testing Advisory Board (“DTAB”) and advised on the SAMHSA drug testing activities and laboratory certification program. *Id.* at ¶ 3. Dr. Sample continues to serve as a commissioner and laboratory inspector for the College of American Pathologists (“CAP”) in its Forensic Drug Testing (“FDT”) accreditation program (“CAP-FDT”). *Id.* at ¶ 2. Dr. Sample has been licensed or certified by various states as a laboratory director in the area of forensic workforce drug testing. *Id.*

Dr. Sample claims to be knowledgeable about, and familiar with: the “industry standards for forensic hair, oral fluid, and urine testing for drugs of abuse” (*id.* at ¶ 2); the “industry standards for the medical review of forensic workforce test results for drugs of abuse” (*id.* at ¶ 5); and

federally regulated drug testing programs including the U.S. Department of Health and Human Services (“DHHS”) Mandatory Guidelines for federal workplace drug testing (“Mandatory Guidelines”) and the U.S. Department of Transportation’s (“DOT”) drug testing regulations (*id.* at ¶ 4). Dr. Sample has been qualified “on numerous occasions in courts and other forums as an expert in toxicology and the testing of specimens for substances of abuse.” *Id.* at ¶ 1.

Dr. Sample was retained by defendant to (1) review the testing performed by Psychemedics of plaintiff’s underarm hair specimen; (2) review subsequent test results of plaintiff’s underarm hair specimen by Omega, an independent laboratory; (3) opine as to the scientific validity of that testing; (4) provide expert evidence of the applicable standard of care in forensic workforce drug testing; (5) opine as to the reliability of the hair testing, environmental exposure to cocaine, and the ethnic background of individuals testing positive for cocaine/metabolites; and (6) respond to any other allegations asserted against defendant by plaintiff. *Id.* at ¶ 6.

Dr. Sample opined that Psychemedics’ test results are accurate and scientifically reliable and that Omega’s test results confirmed the accuracy of Psychemedics’ test results. [DE-25-1] at 4-9. Dr. Sample then opined that plaintiff’s negative urine test provided no evidence that Psychemedics’ test results were inaccurate or that Psychemedics or reviewing MRO’s breached any applicable standard of care. *Id.* at ¶ 39. Dr. Sample responded to several of plaintiff’s allegations regarding Psychemedics’ and Omega’s lack of SAMHSA accreditation, possible environmental contamination, and the “disparate impact on members of the African American community” based on an ethnic bias due to hair melanin content. *Id.* at ¶¶ 40-51. Dr. Sample concluded that:

Based upon my knowledge of forensic workforce drug testing industry standards, general forensic and scientific principles, and the science and peer-reviewed

scientific literature regarding forensic workforce drug testing, it is my opinion within a reasonable degree of scientific certainty that Psychemedics' handling, testing, and reporting of the underarm specimen identified as having been submitted for testing by Danzy April 28, 2023, complied with all applicable standards of care and its records demonstrate that Psychemedics' test results are scientifically valid and are accurate. There is no factual or scientific basis for any contention that Psychemedics' reported test results are inaccurate or scientifically invalid.

*Id.* at ¶ 52.

## II. APPLICABLE LAW

Under Rule 26(a)(2) of the Federal Rules of Civil Procedure, “a party must disclose to the other parties the identity of any [expert] witness it may use at trial” together “with [a] written report—prepared and signed by the witness—if the witness is one retained or specially employed to provide expert testimony in the case.” Fed. R. Civ. Proc. 26(a)(2)(A)-(B). The report must contain, *inter alia*, “(i) a complete statement of all opinions the witness will express and the basis and reasons for them; [and] (ii) the facts or data considered by the witness in forming them.” Fed. R. Civ. Proc. 26(a)(2)(B).

Rule 702 of the Federal Rules of Evidence governs the admissibility of expert testimony. Fed. R. Evid. 702. The proponent of the expert testimony bears the burden of establishing its admissibility by a preponderance of evidence. *Cooper v. Smith & Nephew, Inc.*, 259 F.3d 194, 199 (4th Cir. 2001). A district court is granted broad latitude in making its determination on the admissibility of proposed expert testimony. *United States v. Gastiaburo*, 16 F.3d 582, 589 (4th Cir. 1994) (“The trial judge has broad discretion under Rule 702.”).

Rule 702 provides that expert testimony is appropriate when it “will help the trier of fact to understand the evidence or to determine a fact in issue.” Fed. R. Evid. 702(a). Rule 702 further provides that a witness qualified as an expert may be permitted to testify where “(1) the testimony

is based upon sufficient facts or data,” (2) “the testimony is the product of reliable principles and methods,” and (3) “the expert has reliably applied the principles and methods to the facts of the case.” *Id.* (b), (c), and (d). Courts have distilled Rule 702’s requirements into two crucial inquiries: whether the proposed expert’s testimony is relevant and whether it is reliable. *See Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 141 (1999); *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 589 (1993); *United States v. Forrest*, 429 F.3d 73, 80 (4th Cir. 2005). The trial court must carry out the special gate-keeping obligation of ensuring that expert testimony meets both requirements. *Kumho Tire*, 526 U.S. at 147.

In order to be considered relevant, the proposed expert testimony must appear to be helpful to the trier of fact. *See Daubert*, 509 U.S. at 591-92. “Testimony from an expert is presumed to be helpful unless it concerns matters within the everyday knowledge and experience of a lay juror.” *Kopf v. Skyrn*, 993 F.2d 374, 377 (4th Cir. 1993) (cited in *Lacayo v. Sodoma*, 122 F.3d 1061 (Table), 1997 WL 583639, at \*3 (4th Cir. 22 Sept. 1997)); *accord Koger v. Norfolk S. Ry. Co.*, No. 1:08-0909, 2010 WL 692842, at \*1 (S.D. W. Va. 23 Feb. 2010) (citing *Kopf*). In addition, the information must “assist the trier of fact to understand the evidence or determine a fact in issue.” *Gell v. Town of Aulander*, No. 2:05-CV-00021-FL, 2008 WL 4845823, at \*4 (E.D.N.C. 4 Nov. 2008) (citing Fed. R. Evid. 702). “Expert testimony which does not relate to any issue in the case is not relevant and, ergo, non-helpful.” *Daubert*, 509 U.S. at 591 (quoting 3 Weinstein & Berger ¶ 702[02], p. 702–18; citing *United States v. Downing*, 753 F.2d 1224, 1242 (3rd Cir. 1985) (“An additional consideration under Rule 702—and another aspect of relevancy—is whether expert testimony proffered in the case is sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute.”)).

“‘[T]he test of reliability is flexible’ and ‘the law grants a district court the same broad latitude when it decides *how* to determine reliability as it enjoys in respect to its ultimate reliability determination.’” *United States v. Wilson*, 484 F.3d 267, 274 (4th Cir. 2007) (quoting *Kumho Tire*, 526 U.S. at 141-42). One factor pertinent to reliability is the proposed expert’s qualifications. *See Sawyer v. Southwest Airlines Co.*, 243 F. Supp. 2d 1257, 1266 (D. Kan. 2003). A witness may qualify to render expert opinions in any one of the five ways listed in Rule 702: knowledge, skill, experience, training, or education. *Kumho Tire*, 526 U.S. at 147. The Fourth Circuit has ruled that, when an expert’s qualifications are challenged, “‘the test for exclusion is a strict one, and the purported expert must have neither satisfactory knowledge, skill, experience, training nor education on the issue for which the opinion is proffered.’” *Kopf*, 993 F.2d at 377 (quoting *Thomas J. Kline, Inc. v. Lorillard, Inc.*, 878 F.2d 791, 799 (4th Cir. 1989)); *accord The Harvester, Inc. v. Rule Joy Trammell & Rubio, LLC*, No. 3:09cv358, 2010 WL 2653373, at \*1 (E.D. Va. 2 July 2010) (citing *Kopf*).

An expert may testify only as to those matters within his identified area of expertise. *Channel Master Satellite Sys., Inc. v. JFD Elec. Corp.*, 748 F. Supp. 373, 386 (E.D.N.C. 1990) (holding that testimony of an expert which is outside his area of expertise is excludable under Rule 702). At the same time, an alleged lack of specific experience on certain details at issue may go only to the weight of the expert’s opinions and not dictate that they be excluded. *Thomas J. Kline*, 878 F.2d at 799 (“One knowledgeable about a particular subject need not be precisely informed about all details of the issues raised in order to offer an opinion.”) (citing *Martin v. Fleissner GMBH*, 741 F.2d 61, 64 (4th Cir. 1984) (“[L]ack of direct experience is not a sufficient basis to reject [a proposed expert’s] testimony, but may affect the weight that testimony is given, a decision



properly made by the jury.”)).

On the reliability of an opinion, the Supreme Court has highlighted non-exhaustive “*Daubert*” factors as helpful in this analysis, including: “a theory’s testability, whether it ‘has been a subject of peer review or publication,’ the ‘known or potential rate of error,’ and the ‘degree of acceptance . . . within the relevant scientific community.’” *Kumho Tire Co.*, 526 U.S. at 145, 119 S. Ct. at 1173 (quoting *Carmichael v. Samyang Tires, Inc.*, 923 F.Supp. 1514, 1520 (S.D.Ala.1996); accord *Daubert*, 509 U.S. at 589-95; *Sommerville v. Union Carbide Corp.*, No. 24-1491, 2025 WL 2383496, at \*8 (4th Cir. Aug. 18, 2025). These factors are not exclusive and need not be rigidly applied; the court “has considerable latitude in considering other factors that bear upon an expert’s reliability in a particular case.” *Collins v. Cottrell Contracting Corp.*, 733 F. Supp. 2d 690, 699 (E.D.N.C. 2010).

The admission of expert testimony must be considered within the context of the other rules of evidence. In particular, Rule 403 provides that the court must ensure that the probative value of any proffered evidence is not “substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence.” Fed. R. Evid. 403. As this court has noted, “[d]espite the court’s ability to exercise broad discretion and flexibility when determining the admissibility of expert testimony, the court must balance this discretion with the concerns of Rule 403 to ensure that the probative value of the proffered testimony is not ‘substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury.’” *Bouygues Telecom, S.A. v. Tekelec*, 472 F. Supp. 2d 722, 725 (E.D.N.C. 2007) (quoting earlier version of Fed. R. Evid. 403).

### III. ANALYSIS

As noted above, the gravamen of Dr. Sample's Report is that "[t]here is no factual or scientific basis for any contention that Psychemedics' reported test results are inaccurate or scientifically invalid." [DE-25-2] at ¶ 52. Plaintiff seeks to exclude the testimony of Dr. Sample and the hair test results provided by Psychemedics pursuant to Rules 702 and 104(a) of the Federal Rules of Evidence. [DE-24] at 1. Plaintiff argues that Dr. Sample's Report does not demonstrate sufficient evidence that his opinions are reliable or admissible under Rule 702, alleging that "the underlying hair test results are based on insufficient data, unreliable methodology, and are scientifically invalid." [DE-24] at 1.

Defendant argues that Dr. Sample's opinion satisfies both *Daubert* and Rule 702 because Dr. Sample's opinion (i) is based upon sufficient facts and data; (ii) is the product of reliable principles and methods; (iii) reflects a reliable application of the principles and methods to the facts of the case. [DE-25] at 6-7.

#### A. Qualified Expert

To start, the court considers whether Dr. Sample is "qualified as an expert by knowledge, skill, experience, training, or education." Fed. R. Evid. 702. Defendant designated and disclosed Dr. Sample as its intended expert ([DE-25-3] at 2) in the field of "forensic toxicology – specifically the interpretation of drug testing results and the methodology for completing the same" ([DE-25] at 5). As summarized above, defendant points to Dr. Sample's extensive credentials both in terms of his education and training, as well as his knowledge, skill and experience. [DE-25-1] at 2.

Plaintiff does not appear to dispute Dr. Sample's qualifications or expert designation in the field of forensic toxicology. *See* [DE-24] at 2 (arguing that Dr. Sample "is uniquely positioned to

understand the stringent requirements of federal drug testing protocols”). Instead, plaintiff argues that Dr. Sample’s “credentials do not override SAMHSA’s legal mandate.” [DE-26] at 7. Based on the information before the court, it finds Dr. Sample qualified by knowledge, skill, experience, training, or education in the field of forensic toxicology.

## **B. Relevance**

The Fourth Circuit has found testimony to be relevant when it meets “Rule 702’s requirement that the expert’s specialized knowledge ‘help the trier of fact . . . understand the evidence or to determine a fact in issue.’” *United States v. Young*, 916 F.3d 368, 381 (4th Cir. 2019). Plaintiff does not appear to argue that Dr. Sample’s report is not relevant to the issue of the scientific validity of hair follicle testing. *See generally* [DE-24]. Plaintiff primarily brings a relevance-based argument that hair follicle testing itself is legally improper as this methodology is not included in SAMHSA HHS regulations. [DE-24] at 1, 3 (“[SAMHSA] in its 2020 Proposed Hair Guidelines explicitly excludes [Benzoylcegonine (“BZE”)] as a reliable confirmatory marker due to its low concentrations in hair and the absence of validated thresholds.”). Plaintiff expands this argument in his reply, contending that “Congress explicitly assigned SAMHSA the exclusive role to regulate drug testing in Federally regulated industries through the Omnibus Transportation Employee Testing Act.” [DE-26] at 2.

As an initial matter, Dr. Sample “served two (2), four-year terms as a Member of the [SAMHSA] Drug Testing Advisory Board . . . , which advises the Assistant Secretary of SAMHSA, on the review of the direction, scope, balance, and emphasis of the SAMHSA drug testing activities and the drug testing laboratory certification program.” [DE-25-1] at 2. The court finds that his experience provides him with unique insights into the scope and requirements of

SAMHSA drug testing. Dr. Sample acknowledges that “only urine drug testing is possible under DOT rules” and that the hair sample test that defendant undertook “is not covered by the requirements of the DOT, Federal Railroad Administration (‘FRA’), or [SAMHSA].” *Id.* at 9. Dr. Sample notes that “[n]either the DOT nor SAMHSA (which the DOT relies on for technical guidelines) have published final requirements for hair testing.” [DE-25-1] at 10. Specifically, Dr. Sample highlights that “SAMHSA has only published (2020) *Proposed* Hair Mandatory Guidelines (“PHMG”) - which discussed the use of hydroxycocaine metabolites as a biomarker for cocaine use - and they have not yet published final guidelines for hair testing.” *Id.* (emphasis added); *see also* Mandatory Guidelines for Federal Workplace Drug Testing Programs, 85 Fed. Reg. 176 (proposed Sept. 10, 2020) (to be codified at 42 C.F.R. cpt. 1).

The Omnibus Transportation Employee Testing Act of 1991, Pub. L. No. 102-143, Title V, 105 Stat. 952 (1991), directed the Secretary of Transportation to develop regulations for the testing of employees for drugs and alcohol in four sectors of the transportation industry, including railroads. *See* 49 U.S.C. § 20140; *see also Am. Trucking Ass’n v. Fed. Highway Admin.*, 51 F.3d 405, 407 (4th Cir. 1995). The statute specifically directs the DOT to “prescribe regulations and issue orders, not later than October 28, 1992, related to alcohol and controlled substances use in railroad operations.” 49 U.S.C. § 20140(b)(1).

Notably while the statute requires that “laboratories and testing procedures for controlled substances, incorporate the Department of Health and Human Services scientific and technical guidelines,” they do not prohibit a private employer in the railroad industry from conducting additional drug testing procedures beyond those prescribed by the DOT. Indeed, DOT regulations expressly contemplate that non-DOT drug tests may be performed in addition to DOT drug tests.

*See* 49 C.F.R. § 40.13 (“How do DOT drug and alcohol tests relate to non-DOT tests?”). Moreover, even if plaintiff argues that his hair follicle test failed to satisfy the requirements for a non-DOT test under 49 C.F.R. 40.13 (*see* [DE-26] at 4), the court does not perceive why such a failure would render expert testimony about the non-DOT test irrelevant. In sum, Dr. Sample’s Report and opinions are outside the common experience of lay persons and, therefore, explains the unique process of hair follicle testing for drug usage.

### **C. Reliability**

Plaintiff’s primary objections to Dr. Sample’s Report focus on its reliability. *See* [DE-24] at 2-8. Specifically, plaintiff contends there is a lack of reliable, scientific evidence surrounding the use of BZE as a biomarker in hair testing. *See* [DE-24] at 3 (“Dr. Sample’s assertion that the detection of 0.54 ng/10 mg of BZE in Mr. Danzy’s underarm hair confirms cocaine ingestion is scientifically unsound.”).

Plaintiff lists a litany of attempted citations in support of his citation.<sup>2</sup> Plaintiff cites “U.S. Department of Justice, 2009” in support of the proposition that “the DOJ found that standard decontamination washes, such as those used by Psychemedics, are insufficient to remove these residues, particularly in porous or curly hair types common in African Americans.” *Id.*<sup>3</sup> Plaintiff argues that “[SAMHSA] in its 2020 Proposed Hair Guidelines explicitly exclude[] BZE as a reliable confirmatory marker due to its low concentrations in hair and the absence of validated thresholds . . . [and] acknowledge melanin’s role in drug retention, highlighting the potential for

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<sup>2</sup> As noted further below, the court believes that it has been able to discern the intended underlying sources for certain of these citations, while for others it has not.

<sup>3</sup> It appears that plaintiff may be referring to a portion of an order by the court in the District of Massachusetts. *See Jones v. City of Bos.*, 118 F. Supp. 3d 425, 437, 440 (D. Mass. 2015) (“A 2009 Department of Justice report further expressed concern about the use of ratios to distinguish exposure from ingestion, noting that metabolites can be present in cocaine as a result of the manufacturing process in unknown ratios.”)

ethnic disparities.” [DE-24] at 3-4. Plaintiff further claims that “[t]he 0.5 ng/10 mg cutoff used by Psychemedics is arbitrary and lacks support from established federal standards.” *Id.* at 4. Plaintiff cites a “2013 study in Forensic Science International” by “Bourland et al., 2013” that allegedly showed that “sweat contamination can lead to false positives in underarm hair, even after washing.” *Id.*

Plaintiff additionally points to “Ropero-Miller et al., 2009” in support of his claim that “[t]he DOJ has determined that [Psychemedics’ wash protocols, consisting of five aqueous washes] are insufficient for curly/African American hair, where contaminants embed deeper into the hair cortex.” *Id.* Plaintiff cites “Henderson et al., 1998” in support of his contention that “[a] National Institutes of Health (NIH)/National Institute on Drug Abuse (NIDA) study found that cocaine concentrations in African American hair are 4-8 times higher than in Caucasian hair after equivalent doses.” *Id.* Plaintiff argues that “Psychemedics’ College of American Pathologists (CAP) accreditation does not equate to federal compliance, as SAMHSA’s National Laboratory Certification Program (NLCP) excludes hair testing.” *Id.* Plaintiff contends that the MROs, Anthony Minissale D.O. and Richard Weinstein M.D. “in this case failed to reconcile the negative urine test (May 10, 2023) with the positive hair test (May 2nd, 2023) violating [49 C.F.R. § 40.145].” *Id.*

Plaintiff represents that a 2017 study by “Moeller et al.” in the publication Analytical and Bioanalytical Chemistry confirmed the presence of Hydroxycocaine metabolites in cocaine-contaminated environments, which allegedly shows that such metabolites can form through “non-enzymatic degradation of cocaine in the presence of heat, light, or humidity, independent of biological use.” *Id.*

Plaintiff summarizes his arguments by claiming that (i) “[t]he marginal cocaine/BZE levels, coupled with the negative urine test, strongly suggest environmental exposure rather than ingestion”; (ii) “CSX’s reliance on non-SAMHSA-certified testing violates federal precedent”; (iii) “The MRO failed to investigate contamination explanations or consider melanin bias, as required by 49 CFR § 40.153.” *Id.* at 6. Ostensibly in support of his position, plaintiff cites to “Jones v. City of Boston, 2014” and provides a “[l]itigation [h]istory” with multiple citations, as discussed below. *Id.* at 6-7.

Defendant argues that Dr. Sample’s Report is based on “sufficient facts and data,” and specifically, the “128-page Laboratory Documentation Package from Omega Laboratories, Inc.” and the “140-page Laboratory Data Package from Psychemedics Corporation.” [DE-25] at 6. Defendant also argues that Dr. Sample’s Report “is the product of reliable principles and methods based on his knowledge, skill, experience, training and education, and which are described and explained in the Expert Report.” *Id.*

The court’s reliability analysis focuses on the “‘principles and methodology’ employed by the expert, not on the conclusions reached.” *United States v. Moreland*, 437 F.3d 424, 431 (4th Cir. 2006) (quoting *Daubert*, 509 U.S. at 594-95). “When evaluating expert opinions, ‘courts may not evaluate the expert witness’ conclusion itself, but only the opinion’s underlying methodology.’” *Ahmad v. Spinnaker Ins. Co.*, No. 1:24-CV-176 (PTG/IDD), 2025 WL 1732520, at \*4 (E.D. Va. June 20, 2025) (quoting *Bresler v. Wilmington Tr. Co.*, 855 F.3d 178, 195 (4th Cir. 2017)). When engaging in this analysis the court must “consider a variety of factors, including whether the method used is generally accepted in the scientific community; the rate of error, if known; the existence and maintenance of standards; and whether the expert’s work has been

subjected to peer review.” *Id.* (citations omitted).

Dr. Sample provides a thorough summary of the documents he reviewed in support of his report, as well as the work he undertook in forming his opinions. *See* [DE-25-1] at ¶¶ 5-6. Dr. Sample notes that both of the laboratories that tested plaintiff’s hair follicle “are accredited under the CAP-FDT Accreditation Program for hair testing as well under the New York State Department of Health – Clinical Laboratory Evaluation Program for hair testing” and that they both hold “ISO/IEC 17025 accreditation.” *Id.* at 10. Dr. Sample further explains that “North Carolina workplace drug testing regulations . . . recognize[] an Approved Laboratory as being one accredited by the CAP.” *Id.* This suggests that the methodologies at issue have been accepted at least by some of the scientific community and are subject to specific standards, and further that Dr. Sample’s endorsement of such methodologies is not unfounded. With respect to error rates, Dr. Sample acknowledges that “environmental contamination, especially for cocaine, is a concern in hair drug testing.” *Id.* Yet he references peer-reviewed scientific literature by Psychemedics and others, which “demonstrated that an ‘extended’ wash procedure coupled with a wash criterion, as used by Psychemedics, would not result in the reporting of a positive drug test in hair externally contaminated with cocaine.” *Id.* at 11. In addition to his own experience, Dr. Sample explains that his opinion is based on “peer-reviewed scientific literature regarding forensic workforce drug testing.” [DE-25-1] at ¶52. Dr. Sample also cites peer-reviewed sources in support of his conclusions (*see* ¶¶ 49-50).

Plaintiff’s critique does not make detailed arguments finding fault with specific elements of Dr. Sample’s methodology or approach. Rather, plaintiff’s appears to argue that because other sources, including the federal government, have allegedly come to different conclusions, Dr.



Sample’s methodologies must be flawed. Plaintiff’s objections relate to the weight to be given to Dr. Sample’s opinions, not their admissibility. *Sommerville v. Union Carbide Corp.*, No. 24-1491, 2025 WL 2383496, at \*9 (4th Cir. Aug. 18, 2025) (“[Q]uestions regarding the factual underpinnings of the [expert witness]’ opinion affect the weight and credibility of the witness’ assessment, not its admissibility.”) (alterations in original) (quoting *Bresler v. Wilmington Tr. Co.*, 855 F.3d 178, 195 (4th Cir. 2017)); *Coryn Group II, LLC v. O.C. Seacrets, Inc.*, No. WDQ-08-2764, 2010 WL 1375301, at \*7 n.19 (D. Md. 30 March 2010) (“The Court recognizes that the flaws [defendant] notes are potentially serious, but even assuming the accuracy of [defendant’s] criticisms, ‘[v]igorous cross examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.’”) (quoting *Daubert*, 509 U.S. at 596)).

Plaintiff’s numerous superficial citations, including, but not limited to, “Boston Police Department Arbitration (2016)”; “EEOC Discrimination Charge (2021)”; “Texas Truck Driver Defamation Case (2021)”; and “Massachusetts Court Exclusion of Test Results (2018)” frustrate the court’s efforts to identify many of the resources he cites in support of his positions. *See Cnty. of Charles Mix v. United States DOI*, 799 F. Supp. 2d 1027, 1034 (D.S.D. 2011) (“[I]f Plaintiff fails to properly explain a claim and provide adequate citation to support it, this Court will neither make Plaintiff’s argument for it nor attempt to guess which portions of the administrative record Plaintiff might be relying on.”); *cf. also Country Mut. Ins. Co. v. Styck’s Body Shop, Inc.*, 396 Ill. App. 3d 241, 254-55, 335 Ill. Dec. 382, 394, 918 N.E.2d 1195, 1207 (2009) (“A . . . court is entitled to have issues clearly defined with pertinent authority cited and cohesive arguments presented . . ., and it is not a repository into which [a party] may foist the burden of argument and research.”)

(citations omitted).

While a handful of plaintiff's cited sources, if credited, support facets of his argument, they fall short of showing that Dr. Sample's report is unreliable. *Nucor Corp. v. Bell*, No. 2:06-CV-02972-DCN, 2008 WL 4442571, at \*4 (D.S.C. 11 Jan. 2008) ("Although defendants make valid points that speak to the weight the finder-of-fact may give [the proposed expert's] testimony, their criticism does not demonstrate that all of his testimony is so unreliable that it should be excluded"). For example, Dr. Sample concedes that the 2009 Ropero-Miller and Stout study, which plaintiff cites ([DE-24] at 4) "demonstrated that washing alone may not preclude a positive result from environmental contamination, based solely on proposed concentration ratio criteria." [DE-25-1] at 11. Yet Dr. Sample counters that "it did not utilize the Psychemedics' wash criterion nor the analysis of hydroxycocaine metabolites, which are now recognized as a reliable biomarker for cocaine use" and furthermore that a 2006 study with the same authors applied Psychemedics's testing protocol, which supported Dr. Sample's position. *Id.*

The court makes no findings at this stage of the proceedings on the comparative persuasiveness of the sources cited by the respective parties, except to find that plaintiff's citations to countervailing authorities fail to demonstrate the Dr. Sample's report is unreliable.

Plaintiff cites *Jones v. City of Bos.*, 752 F.3d 38, 41 (1st Cir. 2014), as legal authority in support of his position. In that case, the plaintiffs claimed that a police "department's program, which used hair samples to test for illegal drug use, caused a disparate impact on the basis of race in violation of Title VII of the Civil Rights Act of 1964." *Jones*, 752 F.3d at 41. The First Circuit reversed the lower court's granting of summary judgment for the defendant, finding instead that there was a "genuine issue of material fact" on whether the plaintiffs could make "a threshold,

prima facie showing of disparate impact.” *Id.*

On remand, the district court considered several of the arguments, which plaintiff raises here, including that “the federal government has chosen not to use hair drug testing in its workplace testing programs.” *Jones v. City of Bos.*, 118 F. Supp. 3d 425, 436 (D. Mass. 2015). The district court also acknowledged evidence supporting that “decontamination procedures . . . [do not] completely [remove] cocaine that has bound to melanin in the inner cortex of a hair specimen due to environmental exposure and the [in]ability of the hair testing to distinguish between environmental cocaine and cocaine that has been processed through a person’s body.” *Id.* at 439-40. At the same time, the court found that “plaintiffs have not presented any evidence that shows this happens in significant numbers in real-world situations.” *Id.* at 440. Further, the district court concluded “that the plaintiffs have failed to present evidence from which a reasonable jury could determine that the hair drug test is not predictive of or significantly correlated with drug use” *id.* at 437 and that “[u]ndisputed evidence . . . suggests that the effect — if any — due to external contamination is a small one after the hair samples go through the Psychemedics decontamination procedure.” *Id.* While the First Circuit subsequently “vacate[d] the district court’s grant of summary judgment to the Department [in part based] on the third prong of the disparate impact inquiry,” they did not find that the hair follicle test was inherently flawed. *See Jones v. City of Bos.*, 845 F.3d 28, 36, 38 (1st Cir. 2016) (denying summary judgment on the third prong of the disparate impact inquiry, because a reasonable jury could find that the alternative of hair testing plus intermittent urinalysis would have generated less of a disparate impact, but also making clear that “[n]one of this is to say that the jurors must so find.”).

Another instructive element of *Jones* for the instant analysis is the posture in which such

questions were considered. The district court in *Jones* considered competing evidence, including competing expert opinions, when making its findings on defendants' motion for summary judgment. *See Jones*, 118 F. Supp. 3d at 446 (D. Mass. 2015); *see also Jones*, 845 F.3d at 31 (the First Circuit finding on appeal that at the district court, "the parties marshalled their evidence, mostly in the form of competing expert opinions concerning the reliability of the test, together with affidavits from the Officers denying drug use."). The court did not find that the conflicting evidence suggested that either side's experts were unreliable. *See id.*; *see also Moore v. Intuitive Surgical, Inc.*, 995 F.3d 839, 850 (11th Cir. 2021) (finding "even when 'a trial court, . . . rules that an experts testimony is reliable, this does not necessarily mean that contradictory expert testimony is unreliable.") (citations omitted). Accordingly, even if the court considered the *Jones* case persuasive with respect to the issues currently before the court, it does not demonstrate that Dr. Sample's Report is inherently unreliable.

Similarly, to the extent that plaintiff seeks to exclude the hair follicle test results of Psychemedics and Omega from this case (*see* [DE-24] at 1), such a question is premature. The persuasiveness of expert opinions related to topics such as the scientific validity of hair follicle tests are more appropriately considered at the dispositive motions or trial stage of a case.

To the extent that plaintiff's reference to "*Smith v. Psychemedics* (2017, Cal. Super. Ct.)" ([DE-24] at 6) is intended to refer to the unpublished California state court of appeals decision, *In re J.M.*, No. D072353, 2018 WL 1442488, at \*10 (Cal. Ct. App. Mar. 23, 2018), that case is inapposite to the situation here. In that case the defendant's expert was rejected based on a finding that he was not a disinterested expert due, in part, to the fact that he was "vice president of Psychemedics[, *i.e.*, the defendant in that case] laboratory operations." *In re J.M.*, No. D072353,

2018 WL 1442488, at \*10 (Cal. Ct. App. Mar. 23, 2018). Here, plaintiff makes the conclusory argument that “Dr. R.H. Barry Sample’s expert opinion, submitted in support of hair follicle test results from an unaccredited competitor, Psychemedic laboratory, presents a fundamental conflict of interest.” [DE-24] at 2. Yet unlike the situation in *In re J.M.*, plaintiff readily acknowledges that Dr. Sample is not an employee of Psychemedic, but rather works for a competitor, Quest Diagnostic Laboratories. [DE-24] at 2.

In sum, the court makes no findings on which parties’ evidence is more persuasive; that is a question for another day. Rather, the court finds that defendant has demonstrated by a preponderance of the evidence that Dr. Sample and his report satisfy the standard for expert scientific testimony.

#### IV. CONCLUSION

For the reasons discussed above, plaintiff’s unopposed motion for leave [DE-27] to file supplemental exhibits to his reply [DE-26] is GRANTED; and plaintiff’s motion to exclude [DE-24] is DENIED.

SO ORDERED, this 19th day of September, 2025.

A handwritten signature in black ink, appearing to read 'BSM', is written over a horizontal line.

Brian S. Meyers  
United States Magistrate Judge